

**401 KAR 59:080. New kraft (sulfate) pulp mills.**

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET  
Department for Environmental Protection  
Division for Air Quality

Relates to: KRS Chapter 224

Pursuant to: 224.10-100

Necessity and Function: KRS 224.10-100 requires the Department for Natural Resources and Environmental Protection to prescribe regulations for the prevention, abatement, and control of air pollution. This regulation provides for the control of emissions from new kraft (sulfate) pulp mills.

**Section 1. Applicability.**

The provisions of this regulation shall apply to each affected facility which:

- (1) Is associated with a kraft (sulfate) pulp mill;
- (2) Is not subject to another standard of performance within this chapter with respect to particulates or total reduced sulfur;
- (3) Commenced on or after the classification date defined below but before September 24, 1976.

**Section 2. Definitions.**

As used in this regulation, all terms not defined herein shall have the meaning given to them in 401 KAR 50:010.

- (1) "Total reduced sulfur (TRS)" means all reduced sulfur compounds including but not limited to hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide expressed in terms of hydrogen sulfide.
- (2) "Classification date" means April 9, 1972.

**Section 3. Standard for Particulate Matter.**

No person shall cause, suffer, allow, or permit particulate emissions from the following affected facilities in excess of:

- (1) Recovery furnace: 2.3 pounds per ton of equivalent unbleached dried pulp produced;
- (2) Lime kilns: 1.0 pounds per ton of equivalent unbleached air dried pulp produced;
- (3) Dissolving smelt tanks: 0.5 pounds per ton of equivalent unbleached air dried pulp produced;
- (4) No person shall cause, suffer, allow, or permit visible emissions in excess of thirty-five (35) percent capacity.

**Section 4. Standard for Total Reduced Sulfur (TRS).**

- (1) No person shall cause, suffer, allow, or permit total reduced sulfur emissions from the recovery furnace of any kraft (sulfate) pulp mill in excess of an exit stack gas concentration of fifteen (15) parts per million by volume expressed as an arithmetic average over any consecutive twenty-four (24) hour period.
- (2) No person shall cause, suffer, allow, or permit total reduced sulfur emissions from the recovery furnace of any kraft (sulfate) pulp mill in

excess of an exit stack gas concentration of forty (40) parts per million by volume for more than sixty (60) total minutes in any twenty-four (24) hour period.

- (3) No person shall cause, suffer, allow, or permit the emissions of various noncondensable gas streams from digester relief, blow tank relief, evaporator hot wells, or multiple effect evaporators containing total reduced sulfur in any affected facility unless treated by thermal oxidation or an equivalent method with ninety-eight (98) percent efficiency.
- (4) Control of other points of emission of total reduced sulfur, shall be considered on an individual basis as determined by the department.

#### **Section 5. Test Methods and Procedures.**

Except as provided in 401 KAR 50:045, performance tests used to demonstrate compliance with Sections 3 and 4 shall be conducted according to the following methods, filed by reference in 401 KAR 50:015:

- (1) Reference Method 5 for the emission rates of particulate matter and the associated moisture content.
- (2) Reference Method 1 for sample and velocity traverses.
- (3) Reference Method 2 for velocity and volumetric flow rate.
- (4) Reference Method 3 for gas analysis.
- (5) Reference Method 9 for visible emissions.
- (6) Reference Method 16 for the concentration of TRS. All concentrations of TRS from the lime kiln and recovery furnace that are measured as required by this subsection shall be corrected to ten (10) percent by volume oxygen and eight (8) percent by volume oxygen, respectively, when the oxygen concentrations exceed these values.
- (7) Reference Method 17 (in-stack filtration) may be used as an alternative method for Reference Method 5 provided that a constant value of 0.009 g/dscm (0.004 gr/dscf) is added to the results of Reference Method 17 and the stack temperature is no greater than 205°C. (400°F).
- (8) For particulate tests, the sampling time for each run shall be at least sixty (60) minutes and the sampling rate shall be at least 0.85 dscm/hr (0.53 dscf/hr) except that shorter sampling times, when necessitated by process variables or other factors, may be approved by the department. Water should be used as the clean up solvent instead of acetone in the sample recovery procedure outlined in Reference Method 5 or 17.

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